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THE TUSAYAN RITUAL: A STUDY OF THE INFLUENCE OF ENVIRONMENT ON ABORIGINAL CULTS.

BY

J. WALTER FEWKES.

FROM THE SMITHSONIAN REPORT FOR 1895, PAGES 683–700
(WITH PLATES LXX–LXXIII).

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THE TUSAYAN RITUAL: A STUDY OF THE INFLUENCE OF ENVIRONMENT ON ABORIGINAL CULTS.[1]

By J. Walter Fewkes.

The science called ethnology claims as its field of research the study of all racial characteristics of man. It deals not only with his physical features, social grouping, and geographical distribution, but also with the products of his hand and mind, his thoughts and feelings. No race or individual is so low in the scale of being as to be utterly devoid of some idea of the supernatural, and as this is a universal human characteristic it is naturally one of the subjects which presents itself for study by the ethnologist. The study of the evolution of supernatural ideas, like that of all other human characters, ought not to be limited to a few favored races, nor should the term "religion," in its scientific use, be restricted to any group or race of man. It must be broad enough to embrace the supernatural conceptions of all men, low and high in the scale. No poor or insignificant grouping of men and women should be regarded too wretched to be studied, and the scientific man can not overlook any if he is loyal to scientific methods. A generalization which is built on limited knowledge of the religious characteristics of a few men or those of gifted races will as surely fail as a general law of linguistics based on the language of any one of the great races to the neglect of others. There was a time when naturalists overlooked the lowest animals in their studies of the evolution of organic life, but now it is universally recognized by biologists that we must look to the most inferior animals for a solution of many problems connected with the highest. In studies of the development of the supernatural in the mind of man the same thing is true. The laws of the evolution of religious thought can not be scientifically studied if the culture of primitive man is neglected. Unless I am greatly mistaken, the roots of some of the purest spiritual conceptions reach far down into savage and barbarous stages of culture.

We are accustomed to designate the crude supernatural ideas of savage and barbarous peoples as cults, and every cult will be found on examination to be composed of two complemental parts, known as

[1] Saturday lecture in the Assembly Hall of the United States National Museum, May 16, 1896.

mythology and ritual. Around the former group themselves the various beliefs regarding the supernatural, and about the latter the processes by which man approaches and influences these supernal conceptions. This bifid strand runs through all supernatural ideas, from those of the savage to the civilized man. As nature has thus united them, they must always be considered together in scientific studies. We have seen in one of the previous lectures of this course how certain arts of man are affected by environment. I shall endeavor to show a connection between ceremonial practices and climatic conditions, which are, I take it, essential factors of environment. For an illustration, I have chosen the influence of an arid climate upon the ritual of one cluster of American Indians.

There are certain common components of all cults which are as widely spread as the races of man and exist independently of surroundings, while there are others which are profoundly affected by environment. Our subject especially deals with the latter, and as the ritual is capable of more exact scientific analysis, I have in mind to discuss the modifications in it which can be traced to purely climatic causes.

To simplify the elements of the problem we must chose not only a primitive form of ritual, but also as far as possible one which has been but slightly modified by the introduction of foreign influences, and hence other environments. We must avoid as much as possible complexity due to composition. It is a very difficult task to determine the aboriginal cults of any primitive people, for modifications resulting from contact with other races are present almost everywhere we turn.

Every cluster or grouping of men known to me is composite in its character. Yet the task is not wholly hopeless or beyond our powers. The work before the American student is facilitated by the fact that we have still living in our country surviving members of the American race who, on account of isolation, have been slightly modified by foreign influences. I wish this afternoon to call your attention to one of these, and to discuss the influences which evironment has exerted on their ritual.

The people concerning whom I shall speak are commonly called the Mokis, although they prefer to be known as the Hopi. They live in a region of Arizona, which from its discovery in the middle of the sixteenth century, has been designated Tusayan. The Hopi or Tusayan Indians belong to the so-called village or pueblo people—the peculiar culture of prehistoric Arizona, New Mexico, Colorado, and Utah. While what I shall say especially concerns one group, it may in a general way be applied to the culture of a wide territory called the pueblo area of the southwestern part of the United States. In a natural sequence a discussion of the effect of environment would follow a statement of the distinctive characters of the physical features which characterize surroundings; and in order that you may have an idea of the climatic conditions of Tusayan, let us take a few moments to

consider these peculiarities of the environment. In physical features this province is a part of the great arid zone of the Rocky Mountains, to which in former times was given the name of Great American Desert. It lies in the northeastern part of Arizona, about 90 miles from the nearest village of white men on the south and about the same distance east of the Grand Canyon of the Colorado. On all sides it is isolated by dry deserts, a dreary extent of mountains, mesas, and arid plains about 6,000 feet above the level of the sea. No permanent streams of water refresh these parched canyons or fields, and the surroundings of this isolated tribe, organic and inorganic, belong to those characteristic of desert environment. The rains are limited in quantity—liable to fail at planting times, although later in the summer pouring down in copious torrents, that fill the depression by which the water is rapidly carried away from the thirsty fields. Springs of permanent water are small and weak, and when abundant, poor and hardly potable. In this unpromising land a few less than 2,000 Indians strive to maintain themselves by agriculture from a barren sandy soil which a white farmer would despise.

Nor is the unremunerative soil the only hostile environment with which this industrious race of aboriginal farmers has had to contend. Incoming marauders, in the form of nomadic enemies, have from prehistoric times harassed them, preyed on their farms, and forced them to adopt inaccessible mesa tops, high above their fields, for protection. Perched on these rocky eminences they have erected seven stone villages in so clever a way that they seem to be a part of the cliffs. Animals in desert surroundings as a protective device have taken on the color of the soil, but these men have built their towns in the cliffs so deftly that they seem to be parts of the mesas themselves. They have succeeded well in this protective device, due to environment, for at a distance the pueblos are indistinguishable from the cliffs on which they stand.

I need not dwell on the forbidding aspect of the mesa tops on which these villages are built. Not a sprig of verdure, drop of water, or fragment of fuel is to be found upon them. If there is one physical feature which may be said to characterize Tusayan, it is the paucity of water, or rather its unequal distribution in different seasons of the year.

The character of animal life is also significant, for it is of such a nature as to exert a profound influence. A race dependent on animal food alone would have starved for game. The great ruminants, as the bison, which more than any other animal influenced the culture of the Indians of the great plains of the Mississippi, never visited this region. No domesticated animals made pastoral culture possible. There were small rodents, many rabbits and hares, and a scanty supply of antelope in distant mountains. Unpromising as was the soil for agriculture, the resources of the hunter were much less, and in this region man was forced to become an agriculturist.

It is, therefore, clear that the sedentary agricultural life of the Tusayan Indian is the direct result of organic and inorganic surroundings. Forced from some reason unknown to me to live in a land where animals were so few that he could not subsist from the products of the chase, he found a possible food supply in plant life, and he accepted the inevitable. He adopted the life which environment dictated,[1] and accepting things as they were, worked out his culture on the only possible lines of development. He raised crops of maize, melons, and beans, cultivated and harvested various grains, but at times when other things failed found food in cacti and the meal of piñon nuts. Accepting the inevitable, man's ritual became a mirror of that part of his environment which most intimately affected his necessities. The irregularity of the rains, and the possibility that the corn may not grow, developed the ritual in the direction indicated. As long as the processes of nature go on without change, no special rain or growth ceremonials would develop. In a bountiful soil which never fails the farmer, where the seed dropped in the ground is sure to germinate, and the rains are constant, no ritual would originate to bring about what was sure to come. But let natural processes be capricious, awake in a primitive mind the fear that these processes may not recur, let him become conscious that the rains may not come, and he evolves a ritual to prevent its failure. He is absolutely driven to devise ceremonials by which to affect those supernatural beings whom he believes cause the rain and the growth of his crops. The cults of a primitive people are products of their necessities, and they become complicated as the probability of their needs not being met are uncertain. The two needs which sorely pressed the Hopi farmer were rain to water his crops and the growth and maturity of his corn. My problem, therefore, is to show by illustrations that the two components, rain making and growth ceremonials, characterize the Tusayan ritual, as aridity is the epitome of the distinctive climatic features of the region in which it has been developed.

There are, as before stated, certain elemental components of all cults which are as widespread as man, and apparently exist independently of climatic conditions. These elements are psychical, subjective, and occur wherever man lives in deserts, islands, forests, plains, under every degree of latitude and temperature. A more profound philosophical analysis than I can make may resolve even these into effects of environment, but their universality would seem to show that they are not due to the special climatic condition of aridity characteristic of Tusayan. I do not regard it pertinent to my discussion to attempt to explain their origin, but we can better appreciate the Tusayan ritual.

The genus *Homo*, emerging from genera of animals, most of which

[1] For a discussion of the relations between highest stages of culture in aboriginal America and arid climate, see my article on Summer Ceremonials at Zuñi and Moqui Pueblos, Bulletin Essex Institute, Vol. XXII, Nos. 7, 8, 9. Salem, Mass.

were timorous and bodily weak, inherited from them a wonder and fear at anything unusual or uncanny. This dawning intelligence, influenced by such sentiments as wonder, fear, hope, and love, reached that mental condition when, as pointed out by King, it ascribed all happenings about itself to luck.[1] His heritage was a mind unable to separate the normal from the abnormal, and everything to such a mind is mysterious, and all nature is regarded as living, but we can hardly suppose that in that condition it deified or saw gods in everything. Man understood the causes of few of the mysteries about him, and felt himself at the caprice of chance. He was a consistent fatalist, overlooking good, for that was normal, but associating the bad with chance. In this early condition a stage of supernaturalism called fetishism, or the use of charms, spells, amulets, mascots of various kinds to control chance, arose. As far as I know, no race has wholly outgrown this condition, and the lower we descend in the scale of humanity, either historically in our own race, or ethnographically among savages, the relative predominance of fetishism increases. There is no more constant element, none following the same law of increase; the present forms of monotheism have the least, the lowest savage the most. While at present there survives no people so degraded that fetishism is the only cult, those nearest that stage are the lowest in mental, moral, and social attainments. I need not remind you that at that early stage a fetish was not an idol, it may or may not have had a regular form; a stone, a root, an amulet may serve as a fetish. In this stage of development every individual came to believe that he had a certain protective charm. We can hardly believe he had a system of gods or that he recognized such. Later in its evolution fetishism became incorporated with other higher elements, especially symbolism, but in its archaic conception this was impossible.

The highest outgrowth of pure fetishism was the shaman or medicine man. It was recognized that certain men were gifted with occult powers beyond their fellows, and were more potent to control happenings. But this medicine man made use of impersonal amulets, not personal spirits.

The second stage in the growth of the supernatural was a belief in a spirit[2] or double of man, the concept of animism. When through

[1] I find myself in accord with Mr. J. H. King, who has discussed this subject at length in his work, The Supernatural; its Origin, Nature, and Evolution. While there are several points in his discussion where I can not see my way clear to accept his interpretations, I have in others found my views almost coinciding with his. He has discussed the subject in so scholarly a manner that the small space I can give to this great subject might have been better occupied with quotations from his volumes. His work should be thoughtfully studied by everyone interested in this subject.

[2] The recognition of spirit was of very early date, and is regarded by Sir J. Lubbock, Dr. Tylor, and Herbert Spencer as characteristic of all supernaturalism. Mr. King, however, seems to me to have advanced strong reasons to show that fetishism may have antedated animism. Although I have adopted his view, I am sure there is much to be said on the other side.

dreams and other psychical phenomena man recognized his soul, he immediately extended his concept to animals, plants, stones, all things, and thus everything was thought to have an intangible double, soul. Man sought to ally himself with some one of these souls; if a hunter, some animal spirit, for instance, as an aid. This became his totem, and everything came to be a totem of power depending on needs of man. As fetishism was the archaic condition in the groping of the human mind, totemism was the following, and both evolved together, mutually reacting on each other and interdigitating in their development.

As the inevitable outgrowth of animism and its twin brother totemism came ancestor worship. Totemism and animism are sometimes limited to animal worship, from the fact that zoomorphic totems naturally were chosen by hunters, but especially among agricultural people totems of corn, rain, and the like replaced zoomorphic forms. The forces of nature thus became totems—sun, moon, earth—some with animal, others with human personalities. A totem of a family became a tutelary god, and groups of tutelary gods with a regal head became a council of gods as among the old Greeks.

Political and religious conceptions kept pace, a patriarchal head of the family was reflected in the mythology. A king suggested a monotheism. Isolated phratries living in groups like the prehistoric pueblos recognized no supreme political chief; their system was feudal; they were too low for monotheism. I believe there is no good evidence to prove that they ever advanced higher in the evolution of mythology than a form of totemism, in which powers of nature under anthropomorphic or animal disguises were worshiped.

I have said that the ritual of man can not be separated from his beliefs; it is incomprehensible alone. Let us, therefore, glance at the mythology of the Tusayan Indians. These people had never, when unmodified by European influences, advanced higher than the worship of anthropomorphic powers of nature, although all lower forms of worship, as of animals, ancestors, and fetishism, were prevalent. As far as I have studied the beliefs of the Tusayan Indians, I find no evidence that they recognized monotheism or the existence of a Great Spirit, creator of all things. With them as elsewhere among American Indians whenever we find a knowledge of a Great Spirit we see, as pointed out by Mr. R. Dorman,[1] "Nothing more than a figure of European origin reflected and transformed almost beyond recognition in the mirror of the Indian mind." It is suggestive that the Indian knows only the name, he has no stories pertaining to him, but when you inquire about creation you elicit myths of the works of a spider woman or the birth of men from the caverns of the earth. A conception of a Great Spirit, wherever reported from savage people of North America, is the work of missionaries, soldiers, or traders.[2]

[1] Anthropological Institute, Journal, Vol. XI, page 361.

[2] Considerable evidence has been adduced, mainly from documentary sources, that the more civilized people of Central America attained in Precolombian times the

All cosmogony begins with a created earth and that earth is mother of gods and men. From the under world, a cavern in the earth, men crawled to the surface through an opening called the sipapû. Races, like individuals, grew or were born; there is no hint as to how mother earth was created.

The highest supernatural beings were deified forces of nature endowed with human or animal forms. Among these were sky gods, earth gods, and their offspring in the early times when the race of man was young. The pueblos deified the sun and called him father of all, and so important is the place that he plays in their beliefs that they are ordinarily called sun worshipers. They endow him with human form, speaking of the disk as his mask. Each day he is thought to rise from his home in the under world and at night sinks into a western house. The pueblo Indians live in houses. Their chief supernatural has a house, as indicated by their use of this word for his place of rising and setting. The sun is a benificent being all powerful to bring the rains. In other parts of America among warriors he is appealed to to destroy enemies. Among those people whose environment necessitates rain he is regarded as all powerful for that purpose. Like ancient Aryans, the Tusayan Indians pray to the rising sun for blessings, but the meaning of the word "blessing" is always rain, that the farms may be watered and the crops grow to maturity. The worship of the sun, therefore, is of great importance; it pervades all the ritual, but it is always with one intent—the overpowering need of the agriculturist for rain in a desert environment.

As I have used the word "prayer," it may be well for me to point out the signification of this word among these people. We are dealing with a race in that stage of culture where the symbolism is all-important. Their word for prayer is, "scatter," that is, to scatter sacred meal. When a Tusayan priest addresses a supernatural being of his mythology he believes he must do so through the medium of some object as a prayer bearer; he breathes his wish on meal and throws this meal to the god. The prayer bearer is thought to have a spiritual double or breath body which carries his wishes. It is an old idea with him, reaching back to fetishism, for his breath with the talismanic words is the spell which brings the desired results. It must be mentioned, however, that oftentimes ethical ideas are associated with Tusayan prayers for rain, and I have frequently heard the priests at the close of their songs

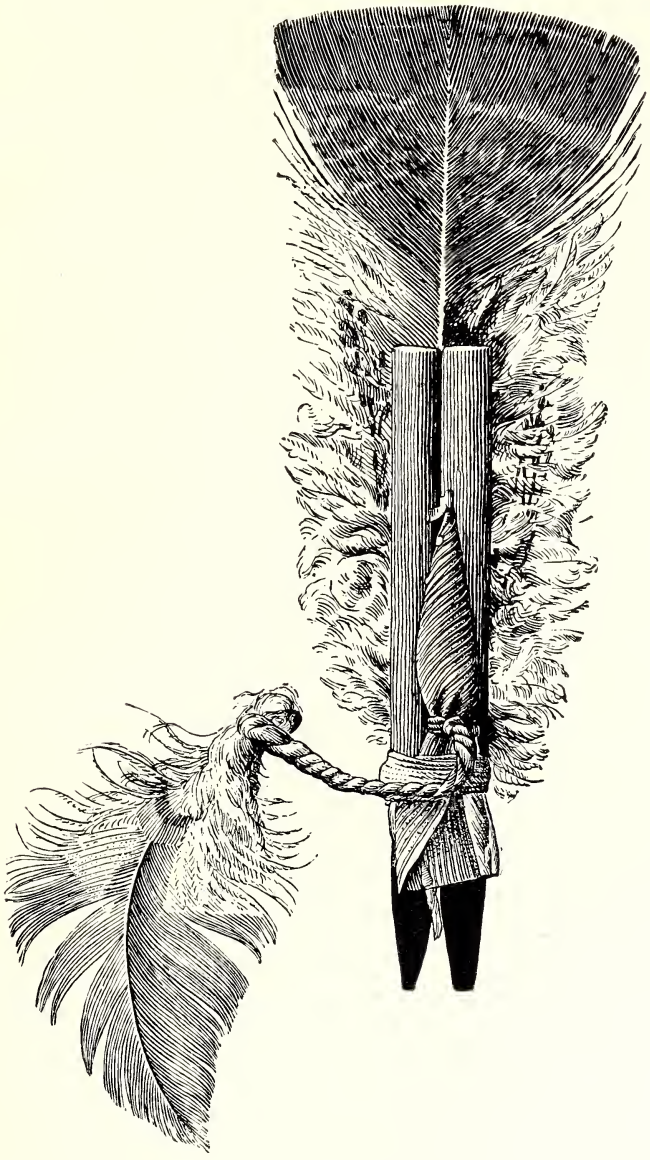
monotheistic stage of supernatural concepts, and if that evidence is unimpeachable it would not be improbable that traces of the same should be found among pueblos. Unfortunately, however, the evidences on this point are none too strong, the probabilities that the writers and the documents did not eliminate their own interpretation too great. The pueblos at present have an idea of a supreme spirit, but there is every reason to believe it is of exotic derivation in the time since Coronado. However honest may be the modern priest who may say that he learned from his grandfather certain current beliefs, the crucial test of their prehistoric character must come from proof that the grandfather's testimony is correct. The sources of error in stories passed down by word of mouth through many generations are too many to permit us to pin much faith to traditions reputed to be of great age.

for rain exclaim, "Whose heart is bad, whose thoughts are leaving the straight path," and as they bewailed that the rains were delayed, sorrowfully resumed their songs and incantations.

An individual intrusts his prayer to sacred meal, but a society of priests has a more powerful charm. In the formal worship by a society of priests this prayer bearer becomes more complicated by appendages. It is furnished with accessories, all of which are symbolic. The meal is placed in a corn-husk packet surrounded with symbolic charms, feathers of birds which love water, herbs which grow in damp places. Such a prayer bearer with symbolic attachments is called a paho, and as if to betray its meaning in its name, the exact translation of this word is the water-wood, the wood which brings the water. These prayer sticks have many different forms, but are always called by the generic name, water-sticks. As their form becomes complicated by reason of symbolic accessories, their manufacture is an act which takes time, and as the prescribed symbols are known only to the initiated, their construction gives rise to a complex series of secret rites. The paho itself is a sacred object, consequently whittlings from it, fragments of string, corn husks, or feathers, used in its construction, are also sacred and must not be profaned. They are, therefore, carefully gathered up and deposited with a prayer in some sacred place.

The simple act of breathing a prayer on a pinch of meal is all sufficient in an individual's use of prayer meal, but in the complicated paho this simple act is insufficient in their belief. The prayer bearer intrusted with the prayers of a community of priests must be laid on an altar, smoked upon, prayed over, and consecrated by song before it is deemed efficacious. The production of this altar, the fetishes which stand upon it, the formal rites attending the ceremonial smoke, and the character of the songs thus develop each its own complex series of rites. Lastly, even the casting of the meal has led to complications. The paho must be offered to the god addressed in a dignified manner worthy of its object and the care used in its consecration. A special courier carries it to a special shrine. He is commissioned to his task with formal words, and he places his burden in the shrine with prescribed prayers. It has thus been brought about that the manufacture, consecration, and final deposition of the elaborate paho or stick to bring the rain occupies several hours, and when repeated, as it is in all great ceremonies for several consecutive days, makes a complicated series of rites.

The ritual of the Tusayan Indians is composite as their blood kinship. Peoples from other parts of the arid region have joined the original nucleus, each bringing its rites and its names of the sun god. Each of these components clung to their own ceremonials, and thus several series of rites developed side by side, adding new names to supernatural beings already worshiped. This state of things is not peculiar to Tusayan. Ra, the Egyptian sun god, has not more aliases than Tawa, the solar deity of the Mokis. So receptive is the Pueblo



A TUSAYAN PAHO.

system in point of fact that they are quite willing to ingraft the Christian ritual on their own, and in some of the modified pueblos of the Rio Grande we find the two coexisting. The sun especially has many names among these people, attributal or incorporated, derived from colonists among them. While it oftentimes puzzles the student to identifiy them, it causes no trouble to the primitive mind, who gladly accepts the medicine of all people, friends or enemies. Of synonyms of the sun, one of the most potent is called the Heart of the Sky.

In the mythology of the American Indians the worship of a mythic serpent is widely associated with that of the sun. Among the Pueblos this serpent appears as the Great Plumed Snake. This personage was a marked one in the Mexican and Central American mythologies. He is found carved in stone on the stately ruins of Chiapas and Yucatan, painted in fresco on the necropolis of Mitla, and represented in stucco on the façades of other high temples of Mexico. As the most powerful of all the divinities of the Nahuatl and Aztec peoples, he has crept into all the mythologies where traces of Nahuatl words can be detected. In Tusayan the Great Plumed Serpent is a powerful deity to bring the rain, and is associated with lightning, his symbol. By simple observation the untutored mind recognizes that rain follows lightning, and what more natural than that it should be looked upon as the effect. He therefore worships lightning because of this power. The course of the lightning in the sky is zigzag as that of the snake, both kill when they strike. The lightning comes from the sky, the abode of the sun and rain god, and the simple reasoning of the Tusayan Indian supposes some connection between the lightning, snake, and rain. The sustenance of the primitive agriculturist comes from the earth, and if the soil is nonproductive the sun and rain are of no avail. The Tusayan Indian thus recognizes the potency of the earth and symbolically deifies it as the mother. Consequently earth goddesses play important rôles in his mythology, and here likewise the composition of the tribe shows itself in the many names by which the earth mother is designated. We find her called "Mother of Germs," "Old Woman," "Spider Woman," "Corn Maid," "Growth Goddess." Strangely enough to us, but by no means strange to a primitive mind, this latter is associated with fire; for in the Indian conception fire itself is a living being, and what is more natural than association of fire and growth?

Before we pass to a consideration of the lesser gods of Tusayan there remains to be considered, among those of primary importance, a strange collection of concepts, the direct outgrowth of sun worship. I refer to what are known as the gods of the world quarters or cardinal directions.

The constant observation of the sun has led to an intimate study of the position of this luminary in different seasons, especially in his variation in places of rising and setting. As is well known, the sun, on account of the obliquity of the ecliptic, rises and sets at different points on the horizon at different dates, varying with latitude, between

certain distances north and south. The intervals on the horizon between extreme northern and southern azimuth is mapped out by a society of sun priests, who note the tree, hillock, or depression in the horizon from which the sun rises or into which he seems to sink at each interval, and thus determine the time for ceremonials with surprising accuracy year by year. The solstitial points of the sun on the horizon thus came to be cardinal points, two of which are called sun houses.[1]

As the four solstices are marked epochs in the sun worship of an agricultural people, the points of rising and setting at these times, or their cardinal points, are associated with minor deities, offspring of sun and earth. These are the positions of the sun houses. Naturally, his children live in these four world quarters, and from that primitive idea is evolved the worship of the so-called world-quarter deities which play such a prominent part in the Tusayan ritual.

Ancestor worship has developed into an elaborate system of minor supernaturals called Katcinas, most powerful, in their conception, to bring blessings, another name in their vocabulary for rain. It would be instructive to trace the origin and define the character of these beings if time permitted. Their name is legion, their ceremonials complicated.

In addition to the deification of the forces of nature, totems of animals, and ancestral personages, Tusayan supernal concepts are almost infinite in variety and number, many of which are simply modified fetishes, the heritage of archaic conditions. To define the character of a tithe of these concepts would be a task too technical for general discussion. Among a people where gods are so numerous, every hostile one must be appeased, no beneficent personage forgotten. From one end of the year to another there is almost a constant round of ceremonials, to describe which in detail would tax your patience.

Fortunately, however, these ceremonials admit of a classification. In one way we may say that the ritual of a people is the sum of all ceremonials which recur with precision in successive cycles. The time commonly adopted by primitive people is a natural epoch, the year determined by the course of the seasons.

Minor divisions of this year, or months, are characterized each by a special ceremonial, so that roughly speaking we may say that each ceremonial year at Tusayan is composed of thirteen great ceremonial events, one for each lunar revolution.

In the most elaborate of these monthly ceremonials occur rites lasting sixteen days, with four additional days for purifications. In the celebration of many the time is curtailed, but no moon shines over

[1]The horizontal positions of the sun at the solstices were probably recognized as cardinal by other peoples of agricultural life. The reader who is interested to follow this subject further is referred to various works on the orientation of Egyptian temples.

Tusayan without witnessing a religious festival of great complexity and prescribed precision, which is repeated every year at the same time.[1]

From this complicated series I will choose two great ceremonials to illustrate the two most important phases of the influence of aridity. These two occur in consecutive months, August and September, are both celebrated in extenso, and will for that reason give a fair idea of the nature of the elaborate components. Both are characteristic of Tusayan, although represented in a somewhat modified form in other pueblos.

The first is called the Snake Dance, the second the Lalakonti. The one is performed by male priests, the other by female; the former an elaborate prayer for rain, the latter for growth and an abundant harvest of maize. Both in their respective way illustrate the modifications developed by the climatic conditions. So complicated are they, however, that I must limit myself to the barest sketch of some of their more striking features.

No better ceremony could be chosen to illustrate the effect of the arid environment than the well-known Snake Dance, the most weird rite in the Tusayan calendar. This dance occurs every summer on alternate years in five of the Tusayan villages, and although a dramatization of an elaborate sun-serpent myth is so permeated by rain ceremonials that it has come to be an elaborate prayer for rain.

The worship of the serpent occupies a most prominent place in the ritual of all barbarous people where each environment has stamped it with special significance. Among the Tusayan Indians there are most complicated rites of ophiolatry, in March,[2] where six effigies of the Great Plumed-headed Snake are exhibited in the secret rooms in connection with symbols of the sun, in a strange dramatization. These ceremonials, however, have to do with the fertilization of maize and might well be chosen to illustrate rites which pertain to the necessities of agricultural people.

It is to that ceremony[3] where reptiles are carried fearlessly by the

[1] For analysis of the Tusayan calendar, see Provisional List of Annual Ceremonies at Walpi. Internationales Archiv für Ethnographie, Bd. VIII, Heft. V and VI. Leyden, Holland.

[2] The Palülükonti; A Tusayan ceremony. Journal of American Folk Lore, October–December, 1893.

[3] For an account of the Snake Dance at Walpi, see Journal of American Ethnology and Archæology, Vol. IV; Houghton, Mifflin & Co., Boston. I have elsewhere pointed out the small part which the Great Plumed Serpent plays in this ceremony, and the absence of fetishes or idols of this personage in the secret portions of the ceremony. The only symbol of the plumed snake which is found is on the kilts of the snake priest. As nearly as I can judge of its place in the components of primitive supernatural concepts, it seems to be an example of animal totemism and ancestor worship in which special powers to bring the rains are believed to belong to the reptiles, descendants, like the living participants, of a snake mother. The conditions are so often paralleled in the beliefs of other primitive people that there seems to be no exception among the Hopi. Cf. King, op. cit., Vol. I, pages 165–207.

snake priests, their younger brothers, as they believe, to which I especially refer, and to which I wish to call your attention. It is impossible for me in the limited time at my disposal to give even a sketch of this complicated rite, so weird and startling in its character as to rival the most heathen ceremony in the wilds of Africa. Yet this uncanny dance in all human probability will be performed in August of the present year in our own country in a Territory which justly aspires to be a State. The participants in it by treaty obligations are citizens of the United States and their children pupils of the public schools.

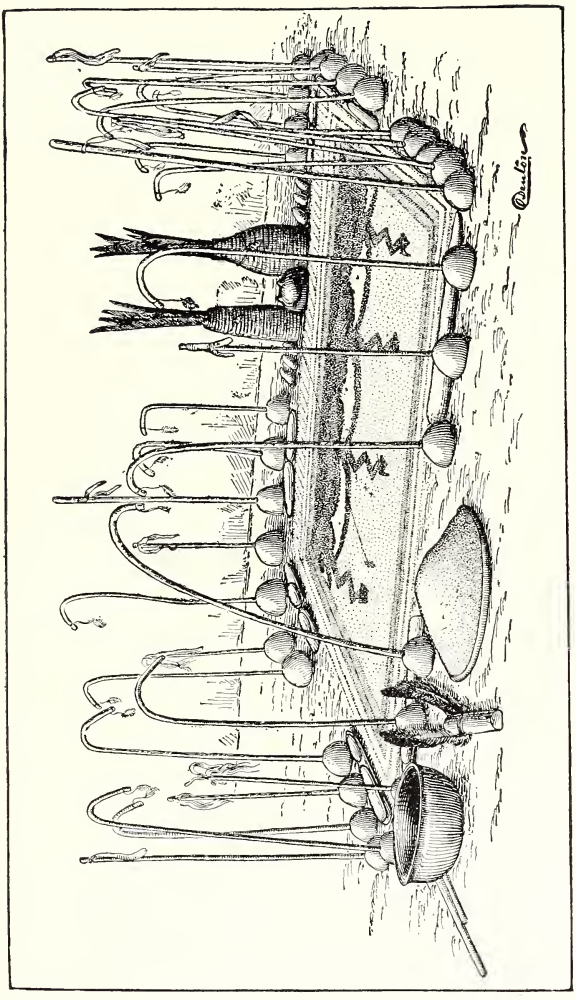
There is little doubt, however, that this survival of aboriginal ceremonials will soon become extinct, although up to the present time it has been but little modified by the new environment which the white men are bringing to the Tusayan Indians. The ceremony is not a haphazard or temporary invention of priests to entertain, but a part of a serious, precise ritual which has survived from prehistoric times to our day. Fifteen years ago the existence of this dance was practically unknown, and to-day, after searching study, comparatively little has been discovered. It may be wholly abandoned before the scientific man is able to collect material enough to make out what it all means.

In order to consider some of the elements of rain-making rites in the Snake Dance and accompanying secret ceremonials, let us first turn to the altars used in this dramatization. The celebration of this uncanny rite is performed by two religious societies or brotherhoods, which are known as the Antelope and Snake priests. The secret ceremonials of each of these priesthoods are very complicated and are performed in subterranean rooms called kivas into which uninitiated are debarred entrance. Each of these societies has in its own kiva an altar of complicated nature about which the ceremonials of a secret character are performed.

The altar of the Antelope priests is of especial interest to us in considering the rain-making motives of the ritual. It consists of an elaborate mosaic or picture made of six different colored sands spread on the floor and surrounded by a border of the same material.

The picture represents sixteen semicircular figures of four different colors, the symbols of rain clouds of the four cardinal directions. From one side of this composite picture are drawn parallel lines representing falling rain. This sand picture, with accompanying fetishes, is known as the rain-cloud altar, the home of the rain clouds.

Seated about this altar for seven consecutive days the Antelope priests daily sing sixteen songs to consecrate prayer sticks, which are later deposited in shrines to the rain gods. These prayer bearers consist of two sticks painted green and tied together midway in their length. At the point where they are bound is fastened a small packet of sacred meal, while to the same is also bound a feather of the wild turkey. This feather is aptly chosen, for the turkey is associated in



ALTAR OF THE ANTELOPE PRIESTS IN THE SNAKE DANCE.

their mythology with a time or place when the surface of the earth was muddy, and as they say the black tip of the feather was colored by the turkey dragging his tail in the black mud. To this prayer bearer is likewise attached two herbs—one male, the other female—plants which love the water. There are many other prescribed details in the manufacture of this prayer stick with which I will not weary you, but there is one point which may be of interest. The prayer bearers or prayer sticks of the first day are made as long as the longest finger of the left hand, and are carried to four shrines of the cardinal points, each of which is about 7 miles from the pueblo. The length of these prayer sticks diminish each day, and in the same ratio the distance of the shrines decreases. On the last of the seven days the prayer stick is the length of the ultimate joint of the middle finger, and the shrines in which they are placed are just outside the town. The intent of the prayers and songs intrusted to these prayer sticks is for rain. The courier who carries them each day is an important priest, and his explanation of why he proceeds in certain ways in his duty may interest you.

He runs swiftly through the whole circuit except when kneeling at the shrines, and is barefooted and naked, that the rain gods may notice him and respond with equal haste to the prayers which he bears. He loosens his hair and lets it hang down his back, symbolic of the way in which he believes the rain gods carry the falling rain which his hair symbolizes. He makes the far circuit on the first day because rain gods dwell far away beyond all cultivated fields. He runs in a circle that all the rain gods may see him. The priests hope the rain deities may notice their courier who bears their offerings to the shrines, and that each day they may come nearer. Hence, on each succeeding day the courier travels on a shorter circumference. It is thus they wish the rain clouds to approach nearer and nearer and pour down their contents on their houses and fields, that the dry river beds may be swollen with water and all farmers hear the pattering rain.

Consider one of the many episodes about the altar in the consecration of the prayer offering. Smoking, as is well known, was in Precolumbian times a ceremonial custom among the aborigines of the Southwest, and in the ritual of the present pueblos every great rite opens and closes with a formal smoke. The pipe lighter is an important functionary, next in rank to the chief, and in passing the pipe certain prescribed usages are always followed and terms of relationship exchanged. The sixteen songs of which I have spoken are divided into two groups of eight each by a unique observance—the smoking of the great cloud pipe. In this ceremony four different kinds of herbs are loaded into a conical pipe, and at a signal the pipe lighter passes a live coal to the chief, who places it in the larger end, kneels down behind the altar, places the larger end of the bowl in his mouth and blows four long whiffs through the pipe upon the sand picture of the altar. The smoke thus

formed is called the rain cloud, which it symbolizes, and the act a prayer to bring the rain.

Let us consider the final public event of the Snake Dance, that so often described, when the snake priests handle venomous reptiles, apparently without fear, in the presence of spectators. This uncanny proceeding has the same intent as the secret rites of which we have spoken—a ceremony for rain. The reptiles are believed to be elder brothers of the priests, and they are gathered from the fields on four successive days to participate in the ceremonies. It is believed that these reptiles have more power to influence supernatural beings than man, and as the acme of the whole series of nine days' observances they are thrown in a heap on the ground in a circle of sacred meals, and the chief of the antelopes says a prayer to the struggling mass, after which they are seized by the priests and carried to the fields commissioned to intercede with rain gods to send the desired rains. In fact, the whole series of rites which make up the snake celebration is one long prayer of nine days' duration, filled with startling components the details of which would weary rather than instruct you.

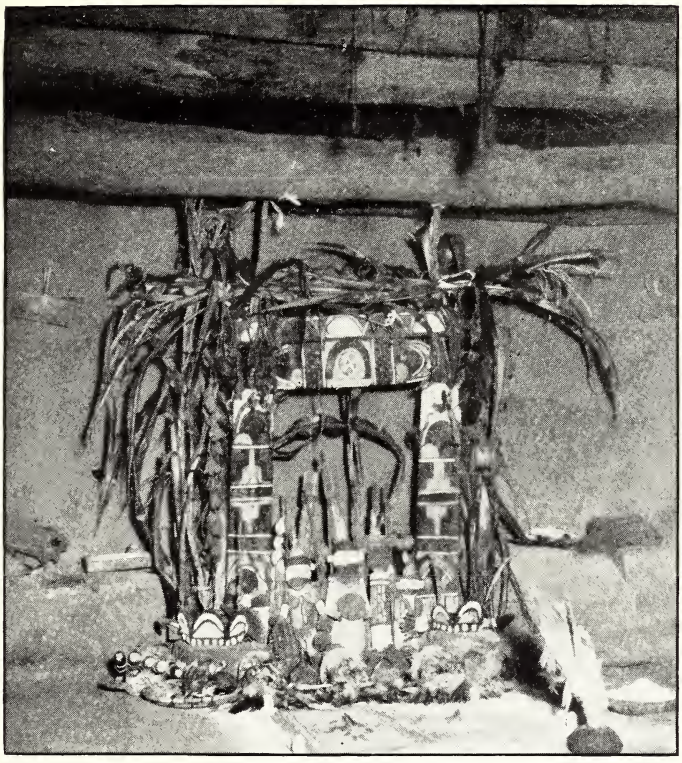
Let us, therefore, turn to another component of the Tusayan ritual which occurs each year in the month following that in which the Snake Dance occurs, the ceremony of the women priests for the maturation of the corn. I refer to the September rites called the Lalakonti, celebrated by a priesthood of the same name.

The ceremony for growth of the crops, which is practically for the harvest of maize, is directly the outgrowth of those climatic conditions which have made the Tusayan people agriculturists. A failure of this crop means starvation, and maize is far from a spontaneous growth in those desert sands. Hence the elaborate nature of the appeals to the supernatural beings which control this function. This great ceremony is naturally of special concern to women, the providers. The corn is the mother, the corn goddess the patron deity of women; the women are chiefs in this their special ceremonial. In turning over the mass of details which have been recorded concerning the festival of the Lalakonti it has seemed to me that I could not better illustrate the points which I especially desire to develop than to explain the altar used by these women priests in this ceremony.

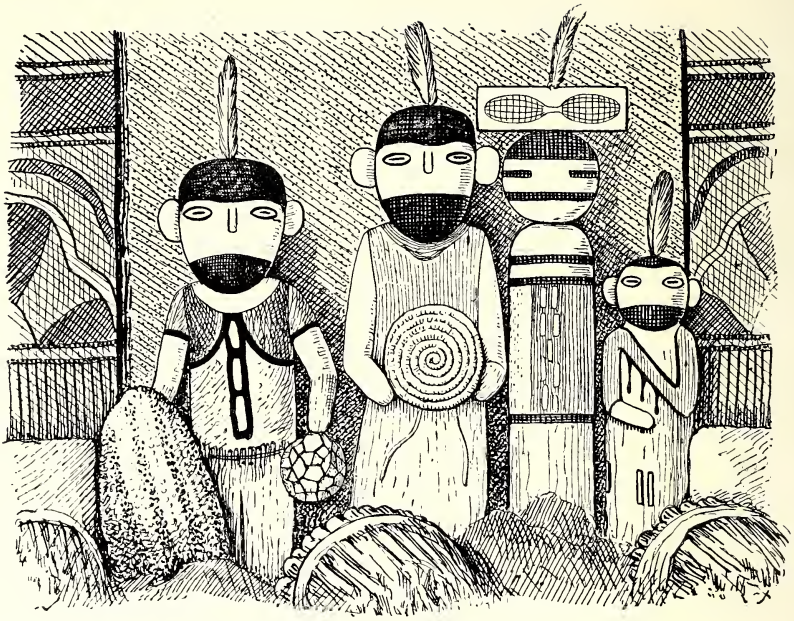
The altar[1] is erected in a subterranean secret chamber entered by a ladder through the middle of the roof; and around this altar are performed many rites the intent of which is an appeal to the gods of growth for abundant harvests.

There are two upright slats, painted with symbolic designs, among which the figures of the rain cloud and falling rain and the lightning which accompanies the rainstorm are most prominent. Back of the altar are sticks serving as symbols of the lightning, the zigzag ones

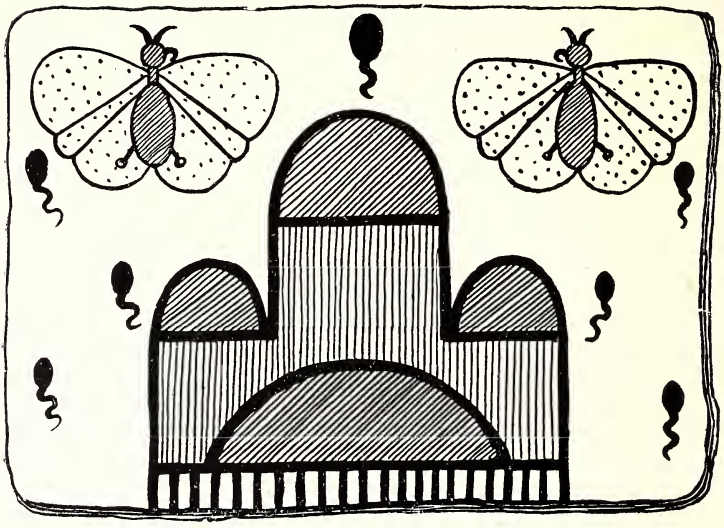
[1] For description of the Lalakonti altar, and ceremonials performed about it, see American Anthropologist, April, 1892. Washington, D. C.



THE LALAKONTI ALTAR.



FOUR EFFIGIES OF THE LALAKONTI ALTAR.



SYMBOLIC FIGURES OF RAIN CLOUDS ON TILE USED IN SNAKE DANCE.

representing the forked and the straight the sheet lightning. Two coronets, one on each side of the alter, are worn by two of the chiefs and they are made in the form of rain cloud symbols, semicircles from which parallel lines representing falling rain are drawn. Here, therefore, we see several rain symbols in prominent places. But the ceremony in which this altar is used is primarily one for the growth of corn; let us examine the objects in it with that thought in mind.

Four effigies or idols between the uprights of the reredos represent the following personages: The one to the right is the goddess of growth. She carries in her belt prayer offerings for abundant harvests. At her feet is an effigy of the corn mountain, colored with different colored corn, since all kinds of corn are under her control. In her left hand she has a small jar of holy water, since corn can not grow without moisture. The figure at her left is the patron goddess of the society who celebrate growth ceremonials, the ancestral deified totem of the fraternity. At her left is the corn goddess, since corn is the one cereal whose growth is desired. This figurine bears on her head the symbol of the ear of maize. No field of corn may be harvested without the protection of the warrior in a country harassed by enemies, and the fourth effigy represents the god of war, whose effigy naturally has a place on this altar. The white meal which is sprinkled on the heads of all the idols represents the prayers of the faithful, for as each priest approaches the altar she breathes her prayer on sacred meal and scatters it on the heads of the effigies. These prayers are for a good harvest, a successful crop and abundant rains.

There are three objects in front of the images which are the badges of the priests, called the "mothers." In advance of these, spread on the floor, is an elaborate picture, made of different colored sands, representing on one side the Earth Goddess, and on the other the Watcher, or little War God. Connected with the altar is a bowl with terraced rim, used as a medicine bowl, and a single upright ear of maize with a feather, a kind of standard, which is placed at the pathway of the kiva to warn uninitiated persons not to intrude on the mysteries which are performed about the altar.

The influence of arid climatic conditions is shown in the character and intent of symbols. The conventional figure of the rain clouds and falling rain is depicted more than any other on various paraphernalia of worship. It is painted on the altars, drawn in sacred meal on the floor of his sacred rooms, or kivas, embroidered on ceremonial kilts. The priest wears it on his marks and paints it on the body. It is an omnipresent symbol.

By a natural connection it is often replaced by figures of animals or plants associated with water. The frog and tadpole appear when the rain is abundant, and for that reason the priest paints the figures of these animals on his medicine bowl, or places effigies of it on the altar. In certain rites he makes clay balls, in which he inserts small twigs,

which he believes will change into tadpoles, and deposits them along dry water courses for the same reason, that rain may come. So shells from the great ocean are likewise esteemed as bringers of water, and fragments of water-worn wood are carefully cherished by him for a like purpose. The dragonfly which hovers over the springs, the cottonwood which grows near the springs, the flag which loves the moist places, becomes a symbol of water. Water itself from the ocean or from some distant spring, in his conception, are all powerful agents to bring moisture. There can be but one reason for this—the aridity of his surroundings. Not alone in pictoral symbols does he seek to bring the needed rains. The clouds from which rain falls are symbolized by the smoke from the pipe in his ceremony, and he so regards them. He pours water on the heads of participants in certain ceremonials, hoping that in the same way rain will fall on his parched fields. Even in his games he is influenced by the same thought, and in certain races the young men run along the arroyos, as they wish the water to go filled to their banks.

To our ways of thinking these are absurd ways in which to bring the rain, but to a primitive mind it is a method consecrated by tradition and venerated from its antiquity.

Symbolic figures of maize, the national food of the Hopi Indians, are no less common on ceremonial paraphernalia than those of rain. Maize is painted on the masks of sacred dancers and represented by effigies on altars. It gives names to several supernatural beings. Every babe, when 20 days old, is dedicated to the sun and receives an ear of corn as its symbolic mother. The badges or palladia of religious societies are ears of corn wrapped in buckskin—symbolic, no doubt, of the time when seed corn was the most precious heritage and preserved by the chiefs. The foremost supernatural being in the Tusayan Olympus is the Corn Maid, who is figured on food bowls, baskets, and elsewhere.

It can hardly be necessary for me to adduce more facts in support of the hypothesis that these two elements of the Tusayan ritual which reflect the climatic surroundings are ceremonials for rain and those for the germination, maturation, and abundance of agricultural products. The necessities of life have driven man into the agricultural condition, and the aridity of the climate has forced him to devise all possible means at his control to so influence his gods as to force them to send the rains to aid him. Wherever we turn in an intimate study of the ceremonials of the Tusayan Indians we see the imprint of the arid deserts by which they are surrounded, always the prayer for abundant crops, and rains for his parched fields.

When one makes the Tusayan ritual a special study he finds it wonderfully complicated in the development of details. No Hopi priest lives who understands the meaning of all these details, nor does he care for an explanation of them. There are two fundamental factors, however, which he can comprehend, and these are always on his lips when an explanation of the ritual is solicited. We cling to the rites of

our ancestors because they have been pronounced good by those who know. We erect our altars, sing our traditional songs, and celebrate our sacred dances for rain that our corn may germinate and yield abundant harvest.

The town crier calls at dawn from the house top the following announcement, which is the key to the whole explanation of the Tusayan ritual:

"All people awake, open your eyes, arise,
Become Talahoya (child of light), vigorous, active, sprightly.
Hasten clouds from the four world quarters;
Come snow in plenty, that water may be abundant when summer comes.
Come ice and cover the fields, that after planting they may yield abundantly;
Let all hearts be glad;
The knowing ones will assemble in four days;
They will encircle the village dancing and singing their lays * * *
That moisture may come in abundance."

I have limited myself to showing that the arid climatic conditions are reflected from the rites of one tribe of Indians, and it would be instructive to see whether these facts are of importance from the comparative side. There are other equally arid regions of the globe where we might justly look for the same results if this climatic condition is as powerful in the modification of cults as implied. There are marked similarities in the climate of Arabia, of Peru, and of Assyria, and as a consequence startling resemblances in their rituals. But there are many differences; and we thus detect that our analyses of causes has not been complete or ultimate, for we have limited it to but one powerful element in the modifications of ceremonials.

Environment is a complicated nexus of influences, organic and inorganic, threads of which we can successfully trace a certain distance, but which eludes as we go further. There are many effects where causes remain to be discovered, and many climatic influences on cults have yet to be clearly discerned.

A few words more and I have done. Theories among civilized men, like things among savages, may become fetishes. It would be lamentable if environment should become a word to conjure with, or if we should use it to cover ignorance of that which we can not explain. I have tried to show that one highly complicated ritual is so plastic that it responds to climatic conditions, but there are elements in it due to some other unknown cause. Because climatic conditions explain certain modifications in human culture the tendency would be to strive to make it do duty in explaining all. Such a generalization is premature and unscientific. The theory that differences of species of animals and plants were due to climatic influences may have satisfied the early students of evolution before Charles Darwin pointed out the law of natural selection. Environment is a factor which profoundly affects animals, but a struggle for existence in which the fittest survive is a law of evolution.

So environment is a potent influence on the culture of man, but there are laws, as yet not clearly made out, back of it which control the evolution of man.

When in the struggle for existence the fittest came to be measured by degrees of intelligence, and no longer by superiority of bodily structure, climatic conditions were still powerful to modify and stimulate thought. The increase in intelligence due to these agents did not develop a new species, for, to whatever heights he rises, man still remains *Homo sapiens.* If, then, the specific identity of all individual men on the globe to-day is true, the superstitions which we have studied are errors of minds like our own, but imperfectly developed and modified by environment. In her mistakes, said the great naturalist Geoffroy St. Hilaire, nature betrays her secrets. By a study of erroneous working of the mind and their probable causes we can discover the nature of mind. Below all ceremonials among all men, savage or barbarous, may be traced aspirations akin to our own since they spring from our common nature. Until some philosopher shall arise who can so analyze environment as to demonstrate that the great religious teachers of man, who, suddenly appearing, have stimulated the race to great bounds in progress, were solely the products of surroundings, we may believe that there is another most potent influence behind environment controlling the development of culture. Throughout all history man, from his own consciousness, has recognized that controlling influence to be higher than environment, and no science nor philosophy has yet succeeded in banishing the thought from his mind.